

RE ITEM V
REASONED STATEMENT WITH REGARD TO
NOVELTY AND INVENTIVE STEP

1. STATE OF THE ART

The following documents are referred to in the present communication:

D1: US-A-2002/0167374

D2: "Reversible electromechanical characteristics of carbon nanotubes under local-probe manipulation" by Tombler et al.

D3: "Nanowire-based very-high-frequency electromechanical resonator" by Husain et al.

D4: "Piezoresistance measurement on single crystal silicon nanowires" by Toriyama et al.

2. NOVELTY - ART. 33(2) PCT

The present application does not meet the requirements of Art. 33(1) PCT, because the subject-matter of the **independent claim 1** is not new (Art. 33(2) PCT).

2.1 *Independent apparatus claim 1*

D1 (see in particular [0040], [0041], [0043]; Fig. 1 and 3), discloses:

a force sensor (10) including a support (12) of two arms (14, 16) carrying a longitudinal electromechanical nanostructure (24), which electric properties are changeable by a mechanical deformation due to a force (see [0043]).

All the technical features of claim 1 are known from **D1**. Consequently, the subject-matter of **claim 1** is not new.

It is to be remarked that the subject-matter of the independent claim 1 is also anticipated by **D2** (see p.769-771), **D3** (p.1240, c.2; parag.2- p.1241, c.1, parag.1; p.1242; c.1, parag.2) and **D4** (see sections III and IV).

2.2 *Dependent claims*

The subject-matter of the dependent claims is also anticipated by **D1** or **D2**:

- **claim 2:** see **D1**, [0043].
 - **claim 4:** see **D1**, Fig. 12.
 - **claim 5:** see **D1**, [0041].
 - **claim 6:** see **D2** (Fig. 1c).
 - **claim 11:** see **D1**, [0047].
3. The subject-matter of the **dependent claims 3 and 7 to 10** does not involve an inventive step (Art. 33(3) PCT), since it involves matter of normal design procedure in the field of force sensors:
- **claim 3:** the U-shape of the support does not provide any non-obvious advantage to the claimed force sensor.
 - **claims 7 to 10:** it is known from the skilled person to use a separate reference sensor to compensate for external environmental effects. This procedure is not specific to the use of nanostructures. Consequently, the subject-matter of claims 7 to 10 is regarded as being within the scope of the customary practice followed by persons skilled in the art.